

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: INVUE

Report Number: P367703

Luminaire Tested: **MSA-SA3A-740-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367703  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-740-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9614 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

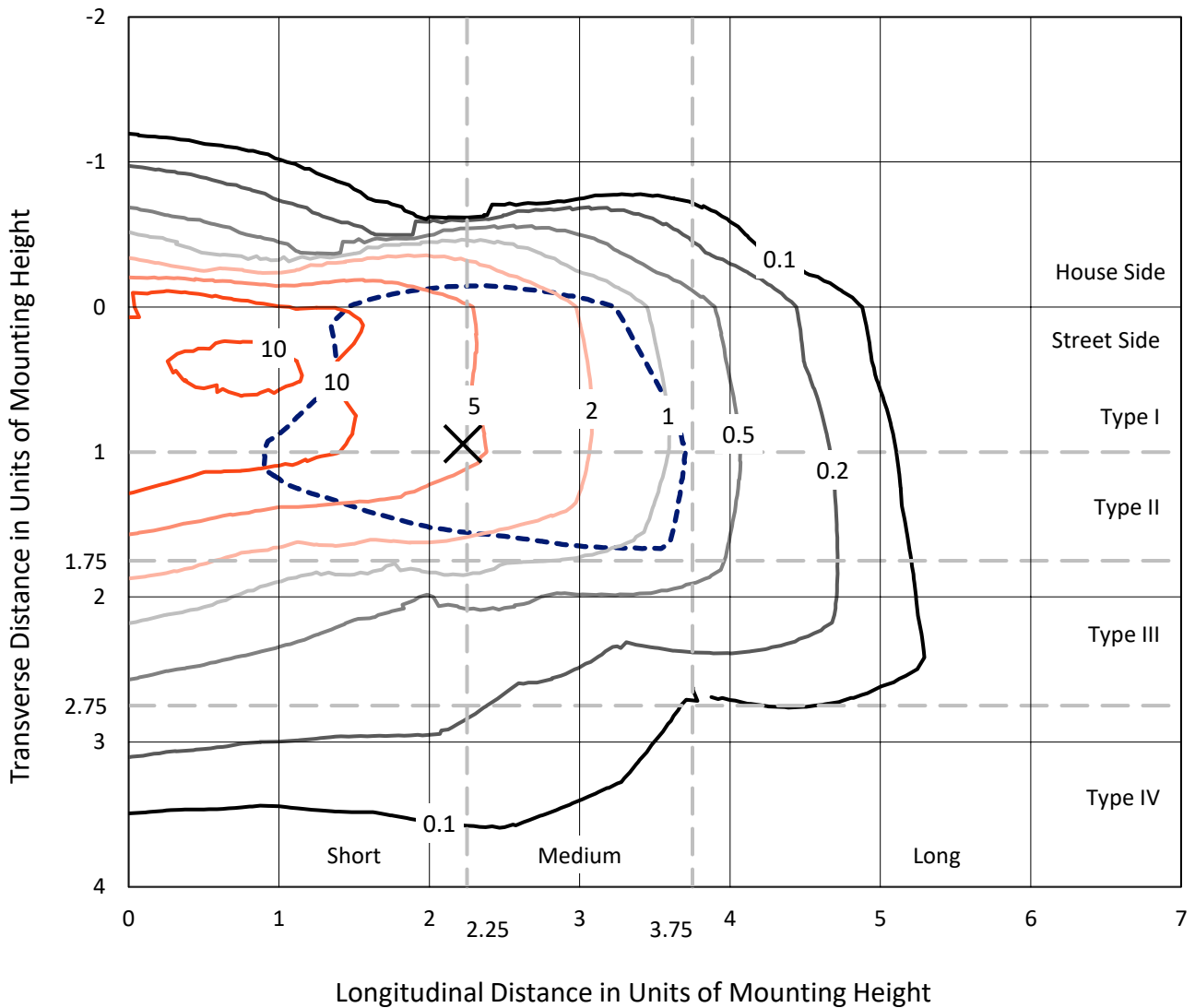
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

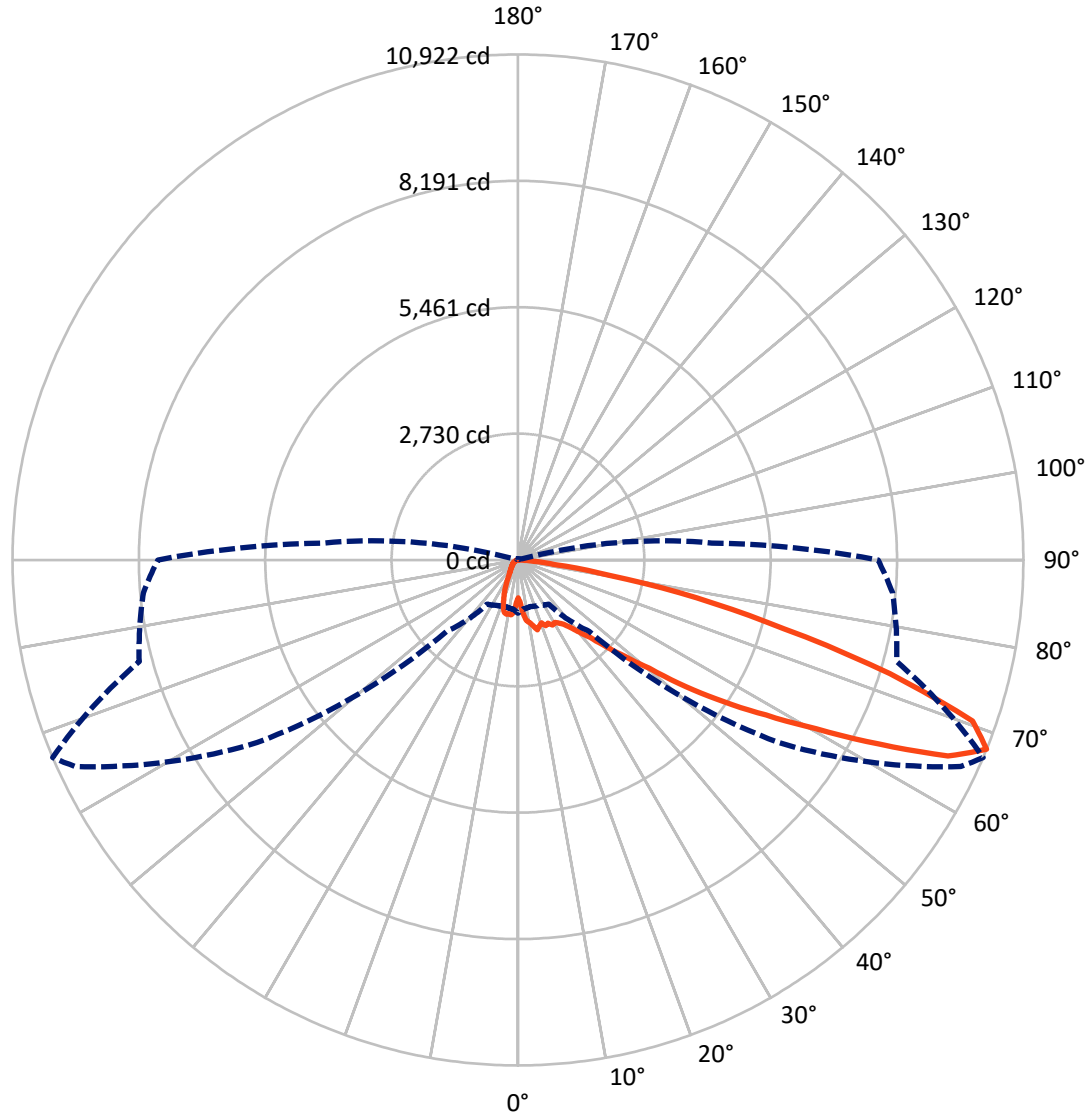
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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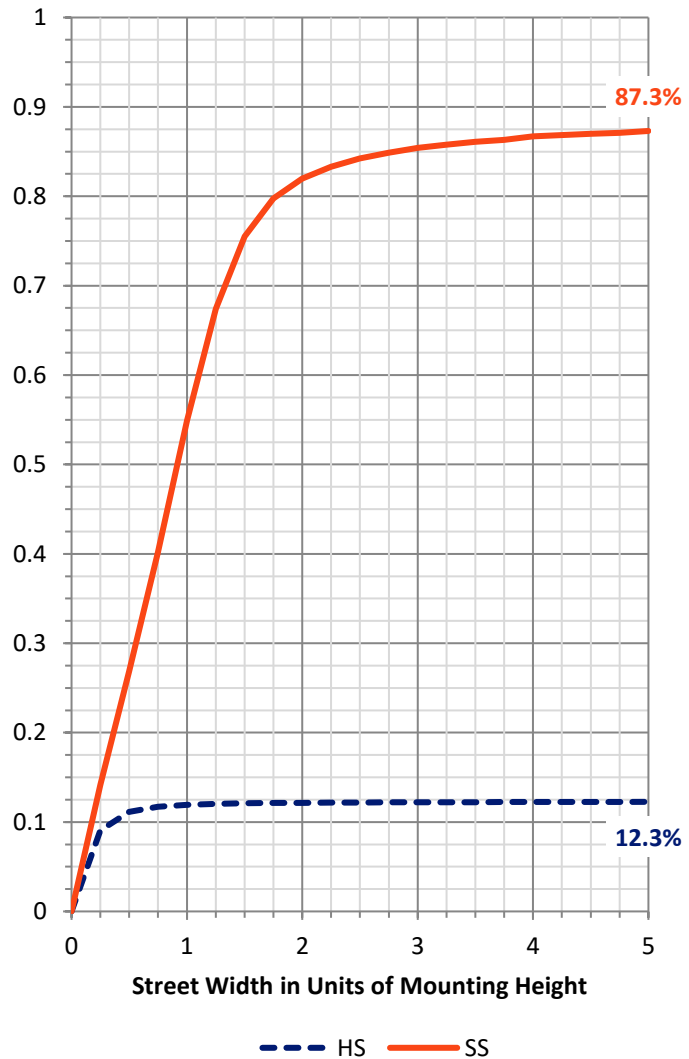
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1189.0	0.0	1189.0
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	8425.0	0.0	8425.0
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	9614.0	0.0	9614.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.8	1.1
10°-20°	304.1	3.2
20°-30°	476.6	5.0
30°-40°	768.5	8.0
40°-50°	1412.2	14.7
50°-60°	2384.9	24.8
60°-70°	2636.7	27.4
70°-80°	1380.0	14.4
80°-90°	148.2	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	9614.0	100.0
0°-180°	9614.0	100.0

**Coefficient of Utilization**

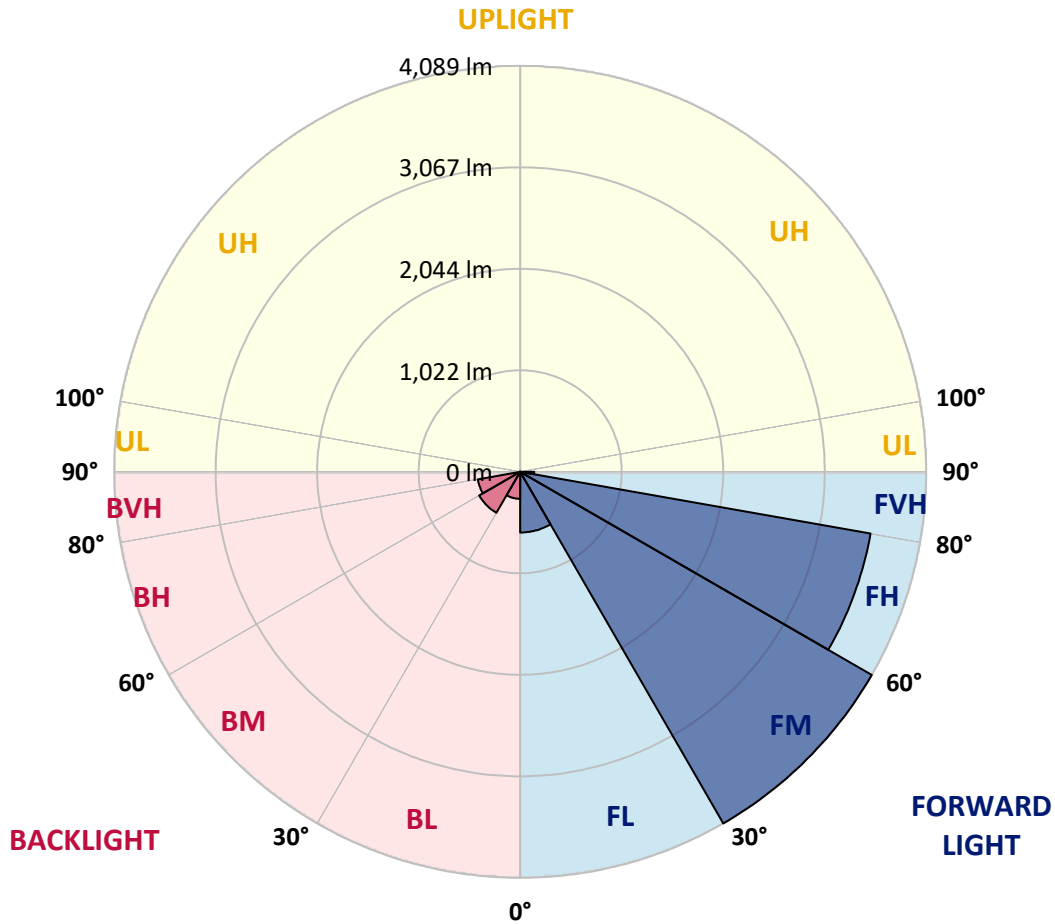


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	611.3	6.4			
FM (30°-60°)	4088.9	42.5			
FH (60°-80°)	3583.0	37.3			G2/5000
FVH (80°-90°)	141.9	1.5			G2/225
BL (0°-30°)	272.2	2.8	B1/500		
BM (30°-60°)	476.7	5.0	B1/1000		
BH (60°-80°)	433.7	4.5	B1/500		G1/500
BVH (80°-90°)	6.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8
2.5°	966.6	933.9	878.3	894.4	926.6	953.4	940.8	915.9	916.4	891.0	982.2
5°	1124.6	1080.7	1048.5	1059.8	1058.3	1057.3	1117.3	1140.2	1150.0	1191.9	1253.9
7.5°	1170.0	1154.4	1120.7	1131.0	1097.3	1099.8	1205.1	1304.6	1320.2	1346.0	1456.3
10°	1152.4	1122.2	1134.4	1134.4	1134.9	1189.5	1260.2	1355.3	1374.3	1473.8	1485.5
12.5°	1133.4	1134.9	1183.2	1174.4	1240.7	1338.7	1362.6	1469.4	1460.2	1546.5	1674.8
15°	1204.1	1241.2	1210.0	1222.2	1228.5	1343.6	1382.1	1524.1	1565.0	1674.3	1757.7
17.5°	1325.6	1330.4	1265.6	1248.0	1293.9	1326.5	1404.1	1472.4	1499.7	1786.4	1904.5
20°	1347.5	1378.7	1312.9	1211.4	1308.5	1353.4	1407.5	1440.2	1451.9	1821.1	1987.4
22.5°	1479.7	1445.0	1339.7	1262.6	1290.4	1339.2	1372.9	1471.4	1541.6	1755.7	2066.9
25°	1547.5	1538.2	1437.7	1371.9	1343.6	1339.7	1416.8	1491.4	1513.8	1823.5	2086.4
27.5°	1709.9	1688.9	1494.3	1486.0	1392.9	1310.9	1418.2	1552.3	1594.3	1759.6	2159.5
30°	1930.8	1923.0	1664.0	1658.7	1510.4	1363.1	1497.2	1589.9	1564.5	1792.3	2208.3
32.5°	2153.2	2216.6	1951.8	1800.6	1689.4	1554.8	1474.8	1578.2	1623.5	1871.8	2298.0
35°	2421.9	2467.7	2198.0	2088.3	1841.1	1644.5	1623.5	1689.9	1709.4	1966.4	2400.0
37.5°	2892.0	2822.8	2593.1	2406.3	2276.6	1964.9	1861.5	1808.9	1854.2	2094.7	2608.2
40°	3239.3	3195.4	2912.5	2800.8	2502.4	2320.0	2049.8	2000.5	2051.3	2226.3	2753.0
42.5°	3658.2	3567.0	3300.7	3225.1	2917.9	2566.3	2292.2	2309.2	2277.5	2486.3	3007.1
45°	4037.2	3831.3	3683.1	3700.2	3536.3	3061.3	2696.5	2688.2	2661.8	2862.8	3274.4
47.5°	4292.2	4112.3	3967.9	3920.6	3901.1	3931.8	3280.7	3133.5	3113.9	3258.3	3695.3
50°	4429.3	4232.2	4053.7	4063.5	4459.5	4757.5	3883.5	3674.3	3681.6	3832.3	4270.8
52.5°	4337.1	4114.2	3926.0	4108.8	4892.6	5308.1	4881.4	4381.0	4550.7	4512.2	5042.8
55°	3911.3	3717.7	3584.1	3911.3	4939.9	5900.6	6109.9	5444.6	5406.6	5318.8	5829.9
57.5°	3194.9	3028.1	2945.7	3291.0	4422.4	6378.1	7343.7	6646.8	6322.5	5954.8	6483.4
60°	2380.4	2257.5	2171.7	2354.1	3484.6	5914.3	8151.9	7779.7	7404.2	6567.8	7070.6
62.5°	1763.0	1663.0	1571.8	1588.4	2399.5	5086.7	8462.0	8980.0	8764.4	7215.0	7624.7
65°	1407.0	1315.8	1251.9	1215.3	1486.0	3827.0	8030.4	9963.6	10212.4	7824.6	8024.6
67.5°	1149.0	1072.0	1040.3	1082.2	1165.6	2181.5	6877.5	10560.6	10921.5	8471.3	8123.1
70°	934.9	871.5	868.1	981.2	1073.4	1329.9	5058.9	10148.5	10420.1	8581.5	7532.5
72.5°	651.6	623.8	668.1	828.6	1063.7	1107.6	2905.2	8398.1	8407.9	7579.3	6195.7
75°	368.7	364.3	434.5	660.8	1035.9	1096.3	1619.6	5934.8	5939.2	5732.4	4292.2
77.5°	202.9	189.7	253.1	446.7	889.6	1071.0	1044.6	4052.3	3948.4	3190.0	1960.5
80°	93.6	88.3	137.0	286.3	650.6	1012.9	837.4	2227.3	2008.3	1039.3	478.4
82.5°	38.5	36.6	62.9	183.9	411.1	815.9	705.7	988.1	793.0	197.5	147.8
85°	6.8	7.3	25.8	111.2	230.2	376.0	572.1	469.2	344.8	54.6	81.0
87.5°	0.0	0.0	5.4	26.8	55.6	102.9	232.1	131.2	90.2	16.1	23.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8	818.8
2.5°	1000.3	992.0	908.1	912.0	917.8	912.5	911.5	888.1	866.6	937.4	936.4
5°	1265.1	1206.1	1148.0	1125.6	1077.3	1013.9	1014.4	994.4	973.9	1002.7	1002.7
7.5°	1453.8	1372.4	1298.7	1167.5	1039.8	924.2	913.9	886.6	855.4	893.0	900.3
10°	1497.7	1427.0	1331.9	1139.3	1018.3	905.7	781.8	679.8	632.5	610.6	606.7
12.5°	1632.8	1580.1	1367.5	1154.4	980.3	789.6	586.7	465.8	383.3	377.0	368.2
15°	1723.0	1686.0	1402.6	1116.8	819.3	567.7	368.7	282.9	249.7	246.8	242.4
17.5°	1863.0	1798.6	1369.0	997.3	640.8	374.6	247.8	223.4	227.3	236.0	229.2
20°	1920.1	1794.2	1295.8	824.2	450.1	251.2	215.1	201.9	212.1	220.4	216.5
22.5°	1978.6	1806.9	1230.9	679.4	294.1	207.8	191.7	184.8	185.8	194.1	194.6
25°	1978.1	1842.0	1155.8	529.2	219.0	184.8	173.1	164.4	160.9	166.8	165.3
27.5°	2074.2	1801.6	1018.8	392.6	192.6	165.3	154.1	143.4	131.2	137.0	137.0
30°	2074.7	1867.4	923.2	281.9	176.5	147.3	137.5	120.9	106.8	111.7	112.2
32.5°	2129.8	1810.3	834.9	215.6	163.9	136.6	115.1	100.0	91.7	94.6	94.6
35°	2192.7	1859.1	699.4	190.2	151.2	121.4	98.5	86.3	80.0	82.4	82.4
37.5°	2400.4	1848.9	605.2	177.0	142.9	109.7	89.7	76.1	73.2	74.6	76.6
40°	2475.5	1921.5	477.5	169.2	129.2	99.0	79.0	68.8	64.9	65.8	66.3
42.5°	2666.7	1937.6	381.4	162.9	117.0	85.8	70.2	62.9	58.0	58.0	59.5
45°	2877.9	1978.1	303.3	157.5	106.8	77.1	63.4	57.5	50.2	49.3	51.2
47.5°	3183.7	2133.2	247.3	146.8	94.6	71.7	58.5	49.7	43.9	41.9	43.9
50°	3695.3	2396.5	218.5	133.6	85.8	67.3	51.7	42.4	38.0	35.6	37.1
52.5°	4417.1	2851.6	203.4	121.4	78.0	60.5	46.3	37.1	32.7	30.7	31.7
55°	5218.8	3373.4	196.1	109.2	71.2	53.2	40.5	32.7	28.8	26.3	26.8
57.5°	5960.1	3864.0	188.7	97.5	64.4	47.3	35.6	28.8	24.9	22.4	22.9
60°	6690.7	4255.6	171.2	83.9	58.0	42.4	31.2	24.9	22.4	19.5	19.5
62.5°	7336.9	4489.7	145.8	72.7	52.2	37.6	27.8	22.4	20.5	17.6	17.6
65°	7776.8	4500.5	117.5	62.4	45.8	32.2	24.4	21.0	19.0	15.6	15.1
67.5°	7783.2	4207.8	94.1	55.6	40.5	28.3	21.9	20.0	17.6	14.6	13.7
70°	6966.3	3476.3	78.5	48.8	35.1	24.9	19.0	19.0	17.1	14.1	12.7
72.5°	5572.4	2656.5	65.8	42.4	31.2	21.5	17.6	18.0	16.6	14.1	12.7
75°	3745.5	1523.6	54.6	36.1	27.3	18.0	17.1	17.6	17.1	14.1	12.2
77.5°	1725.0	485.3	42.4	29.7	23.4	15.1	16.6	16.6	15.6	12.7	10.7
80°	388.7	119.5	30.7	21.9	19.0	11.2	15.1	13.7	12.2	8.8	6.3
82.5°	141.4	36.6	18.5	13.7	11.7	4.4	9.8	9.8	8.8	6.3	3.9
85°	81.0	19.0	10.2	8.8	6.3	2.0	5.4	5.9	4.9	4.4	2.0
87.5°	26.3	4.4	4.9	5.4	4.9	1.0	2.0	2.0	1.5	1.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)